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LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE			DARNO, PATRICK A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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1	Application No.	Applicant(s)				
Office Action Summary	10/517,253	HAWLEY, ADAM STANLEY JAMES				
Office Action Summary	Examiner	Art Unit				
	Patrick A. Darno	2163				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D - Extensions of time may be available under the provisions of 37 CFR 1.7 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	PATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDON	DN. timely filed om the mailing date of this communication. NED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 16 A	Responsive to communication(s) filed on <u>16 August 2007</u> .					
2a) This action is FINAL . 2b) ⊠ This	This action is FINAL . 2b)⊠ This action is non-final.					
,— · · ·	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
4) Claim(s) is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6) Claim(s) <u>1-8,10-15,17-23 and 25-27</u> is/are rej	ected.					
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/o	or election requirement.					
Application Papers						
9) The specification is objected to by the Examine	er.					
10)⊠ The drawing(s) filed on <u>08 December 2004</u> is/s		cted to by the Examiner.				
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date						
3) Information Disclosure Statement(s) (PTO/SB/08) 5) Notice of Informal Patent Application						
Paper No(s)/Mail Date 6) Uher:						

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DETAILED ACTION

1. No new claims were added. Claims 9, 16, and 24 were cancelled. Claims 1, 4, 10-15, 19, 21, and 23 have been amended. Claims 1-8, 10-15, 17-23, and 25-27 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1-8, 10-12, 15, and 17-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,092,178 issued to Anita Jindal et al. (hereinafter "Jindal") in further view of U.S. Patent Application Publication Number 2005/0149531 issued to Sunil K. Srivastava (hereinafter "Srivastava").

Claim 1:

Jindal discloses a method of providing a service to a client from one of a plurality of servers in a server farm (Jindal: Fig. 1 and abstract), each of the servers arranged to provide the service to the client (Jindal: Fig. 1 and abstract), each of the servers being associated with a service address common to all of the servers (Jindal: Fig. 1 and abstract and column 5, lines 48-57 and column 7, lines 1-9), and the servers communicating with one another so as to update identity and status information stored at each of the servers relating to each of the servers in the server farm (Jindal: column 7, lines 30-38 and column 8, lines 30-36), the method comprising the steps of:

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receiving, at a DNS system, a request for the service from the client, the request specifying the common service address (Jindal: column 5, lines 48-52 and column 5, lines 58-59 and column 7, lines 1-9 and Fig. 1);

in response to the request, applying a load balancing method to select a first one of the plurality of servers in the server farm and connecting the client to the first one of the plurality of servers (Jindal: column 6, lines 33-43 and column 7, lines 1-9 and column 8, lines 30-47 and Fig. 1; The client is first connected to the DNS server. Then the DNS server connects the client to the "preferred" server. The "preferred server" is the "first one of the plurality of servers" which the client is connected.);

receiving the identity and status information relating to each of the plurality of servers in the server farm, from the first server in the server farm to which the client is connected (Jindal: column 6, lines 44-54 and column 7, lines 19-26 and column 7, lines 30-38 and column 8, lines 30-36; The first reference shows the information that can be retrieved. Compare this information with the information that the applicant retrieves about the servers in paragraphs [0020]-[0024] of the applicant's specification. The Jindal reference tracks all of the information concerning the server that the applicant tracks and more. The second reference shows how this information is retrieved. Note the DNS server is "the server to which the client is connected". Furthermore, it is clear from Fig. 1 that the DNS server is the first server in the server farm which the client is connected.); and

selecting one of the plurality of servers in the server farm as the server to be used to provide the service to the client, based on the received information (Jindal: column 7, lines 2-5 and column 8, lines 30-47).

Jindal does not explicitly disclose wherein the receiving of information identifying each of a plurality of servers from the server to which the client is connected and selecting one of the

plurality of servers to be used to provide the service to the client occurs <u>at the client</u>. However, Jindal does suggest that the receiving of information and selecting of the server can occur at another computer system separate from the DNS server (Jindal: column 7, lines 17-18; The "trigger" is executable code that causes the retrieval of the server information from multiple servers and then causes analysis of this retrieved information in order to choose a server. Since the trigger can be located at another computer system (different system than the DNS Server) the actions the trigger produces must also be able to occur at locations other than the DNS server.).

Furthermore, Srivastava discloses receiving information identifying each of a plurality of servers from the server to which the client is connected and selecting one of the plurality of servers to be used to used to provide the service to the client occurs <u>at the client</u> (Srivastava: paragraph [0005], lines 8-11).

It would have been obvious to one of ordinary skill in the art the time the invention was made to modify the invention of Jindal with the teachings of Srivastava noted above for the purpose of receiving information identifying each of the plurality of servers from the server to which the client is connected and selecting one of the plurality of servers as the server to be used to provide the service to the client (*Srivastava: paragraph [0005], lines 8-11*). The skilled artisan would have been motivated to improve the invention of Jindal per the above such that the gathered server description information can be used to assist the client in selecting a server (*Srivastava: paragraph [0005], lines 8-11*).

Claim 2:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses information relating to the status of each of the plurality of

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servers (Jindal: column 6, lines 44-50; Note specifically 'operational status (e.g., whether it is up or down).').

Jindal does not explicitly disclose the step of providing the client with this information. The applicant's purpose of providing the client with this information is so that the client can select a certain server from a plurality of servers (Applicant's Specification: paragraph [0006]).

However, Srivastava discloses the step of providing the client with information about a plurality of servers (*Srivastava: paragraph [0005], lines 8-11*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the teachings of Jindal with the further teachings of Srivastava noted above for the purpose of providing the client with information about a plurality of servers (*Srivastava: paragraph [0005], lines 8-11*). The skilled artisan would have been motivated to improve the teachings of Jindal as noted above for the purpose of sending server information to a client concerning a plurality of servers that may assist the client in choosing a particular server (*Srivastava: paragraph [0005], lines 8-11*).

Claim 3:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses information relating to the number of users being served by each of the plurality of servers (Jindal: column 6, lines 44-50; Note specifically 'the number of clients connected.'). Jindal does not explicitly disclose the step of providing the client with this information. The applicant's purpose of providing the client with this information is so that the client can select a certain server from a plurality of servers (Applicant's Specification: paragraph [0006]).

However, Srivastava discloses the step of providing the client with information about a plurality of servers (*Srivastava: paragraph* [0005], lines 8-11). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to further modify the teachings of Jindal with the further teachings of Srivastava noted above for the purpose of providing the client with information about a plurality of servers (*Srivastava: paragraph [0005], lines 8-11*). The skilled artisan would have been motivated to improve the teachings of Jindal as noted above for the purpose of sending server information to a client concerning a plurality of servers that may assist the client in choosing a particular server (*Srivastava: paragraph [0005], lines 8-11*).

Claim 4:

The combination of Jindal and Srivastava discloses all the elements of claim 3, as noted above, and Jindal further discloses wherein the step of selecting a second server includes selecting the server in dependence on the number of users being served by each of the plurality of servers (Jindal: column 6, lines 33-36 and column 6, lines 44-50; The first reference shows that information is collected and analyzed to determine choosing a 'preferred server.' The second reference shows that the information that is analyzed contains the number of users connected to a server. So the selection of a server is dependent on the number of connected users.).

Claim 5:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses information relating to a grouping to which each of the plurality of servers belong (Jindal: column 11, lines 23-35). Jindal does not explicitly disclose supplying the user with this information. The applicant's purpose of providing the client with this information is so that the client can select a certain server from a plurality of servers (Applicant's Specification: paragraph [0006]).

However, Srivastava discloses the step of providing the client with information about a plurality of servers (*Srivastava: paragraph [0005], lines 8-11*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the teachings of Jindal with the further teachings of Srivastava noted above for the purpose of providing the client with information about a plurality of servers (*Srivastava: paragraph [0005], lines 8-11*). The skilled artisan would have been motivated to improve the teachings of Jindal as noted above for the purpose of sending server information to a client concerning a plurality of servers that may assist the client in choosing a particular server (*Srivastava: paragraph [0005], lines 8-11*).

Claim 6:

The combination of Jindal and Srivastava discloses all the elements of claim 5, as noted above, and Jindal further discloses including selecting the server in dependence on the grouping (Jindal: column 11, lines 23-35).

Claim 7:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses wherein the step of selecting a server comprises randomly selecting a server (Jindal: column 2, lines 14-17).

Claim 8:

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses routing the client request to one of the plurality of servers using a DNS round-robin algorithm (Jindal: column 1, lines 45-48).

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<u>Claim 10:</u>

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses including the step of communicating said identify and status information between the servers in real-time (Jindal: column 7, lines 30-38 and column 3, lines 50-54 and column 8, lines 30-47; The first reference discloses how the trigger gathers information from a plurality of servers. The second reference shows that the triggers conduct real-time interrogations (queries) of application servers.).

Claim 11:

The combination of Jindal and Srivastava discloses all the elements of claim 10, as noted above, and Jindal further discloses wherein the information includes information defining the number of users connected to each of the servers (Jindal: column 6, lines 44-50; Note specifically 'number of clients connected.'), and grouping information for each of the servers (Jindal: column 11, lines 23-35).

<u>Claim 12:</u>

The combination of Jindal and Srivastava discloses all the elements of claim 1, as noted above, and Jindal further discloses a method further comprising requesting a connection to the selected second server (Jindal: column 2, lines 2-7 and column 5, lines 19-25).

Claim 15:

Jindal discloses a client for use in a client-server system, the client being arranged to:
request a service, the request specifying a service address common to all of a plurality of
servers in a server farm (Jindal: Fig. 1 and abstract and column 5, lines 48-57 and column 7, lines 1-9), each
of the plurality of servers arranged to provide the service to the client (Jindal: Fig. 1 and abstract) and
the servers communicating with one another so as to update identity and status information
stored at each of the servers relating to each of the servers in the server farm (Jindal: column 7, lines

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30-38 and column 8, lines 30-36) (findal: column 5, lines 48-52 and column 5, lines 58-59 and column 7, lines 1-9 and Fig. 1);

connect to a first one of the plurality of servers in the server farm selected according to a load balancing method (Jindal: column 6, lines 33-43 and column 8, lines 30-47; The client is connected to the "preferred" server.);

receive the identity and status information relating to each of the servers in the server farm, from the first server in the server farm to which the client is connected, said information identifying each of the plurality of servers (Jindal: column 2, lines 47-50 and column 6, lines 44-54 and column 7, lines 19-26 and column 7, lines 30-38 and column 8, lines 30-36); and

select a second one of the plurality of servers in the server farm as the server to be used to provide the service to the client, based on received information (Jindal: column 7, lines 2-5 and column 8, lines 30-47).

Jindal does not explicitly disclose wherein said received information identifying each of the plurality of servers; and select one of the plurality of servers as the server to be used to provide the service to the client. However, Srivastava discloses wherein said information identifying each of the plurality of servers (*Srivastava: paragraph [0005], lines 8-11*); and select one of the plurality of servers as the server to be used to provide the service to the client (*Srivastava: paragraph [0005], lines 8-11*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jindal with the teachings of Srivastava noted above for the purpose of using a client to receive information identifying each of a plurality of servers; and select one of the plurality of servers as the server to be used to provide the service to the client

(Srivastava: paragraph [0005], lines 8-11). The skilled artisan would have been motivated to improve the invention of Jindal per the above such that the gathered server description information can be used to assist the client in selecting a server (Srivastava: paragraph [0005], lines 8-11).

Claim 17:

Claim 17 is rejected under the same reasons set forth in the rejection of claim 3.

Claim 18:

Claim 18 is rejected under the same reasons set forth in the rejection of claim 5.

Claim 19:

Claim 19 is rejected under the same reasons set forth in the rejection of claim 7.

Claim 20:

Claim 20 is rejected under the same reasons set forth in the rejection of claim 11.

Claim 21:

Claim 21 is rejected under the same reasons set forth in the rejections of claims 1 and 15.

Claim 22:

The combination of Jindal and Srivastava discloses all the elements of claim 21, as noted above, and Jindal further discloses comprising a Real-Time Text Protocol server (Jindal: column 3, lines 50-54; Since the triggers executed by the server transfer data in real time, the server must be a Real-Time Text Protocol Server.).

Claim 23:

Claim 23 is rejected under the same reasons set forth in the rejection of claims 1 and 15.

Claim 25:

Claim 25 is rejected under the same reasons set forth in the rejection of claim 3.

Claim 26:

Claim 26 is rejected under the same reasons set forth in the rejection of claim 22.

Claim 27:

The combination of Jindal and Srivastava discloses all the elements of claim 23, as noted above, and Jindal further discloses wherein the servers are operable to communicate in real-time (Jindal: column 7, lines 30-38 and column 3, lines 50-54; The first reference discloses how the trigger gathers information from a plurality of servers. The second reference shows that the triggers conduct real-time interrogations (queries) of application servers.).

3. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jindal in view of Srivastava and further in view of U.S. Patent Application Publication Number 2003/0149653 issued to Neill Penney (hereinafter "Penney").

Claim 13:

The combination of Jindal and Srivastava discloses all the elements of claim 12, as noted above, but does not explicitly disclose in the event that the connection to the selected second server fails, attempting to reconnect to the selected server. However, Penney discloses in the event that the connection to the selected second server fails, attempting to reconnect to the selected server (*Penney: paragraph [0026], lines 1-2*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previously mentioned combination with the teachings of Penney noted above. The skilled artisan would have been motivated to improve the teachings of the previously mentioned combination per the above such

that the client would be granted a second chance to connect to the desired server resulting in greater client satisfaction.

Claim 14:

The combination of Jindal, Srivastava, and Penney discloses all the elements of claim 13, as noted above, and Srivastava further discloses in the event that the reconnection attempt fails, re-requesting the service to obtain the identity and status information for servers in the server farm configured to provide the service (Srivastava: paragraph [0005], lines 8-11; This reference shows presenting server information to a client so that the client can choose a server to connect to. This is exactly what the applicant is claiming here. A reconnection after a failed connection is still simply a connection. Therefore both the reference and the claimed invention of the applicant both perform the same function of simply presenting server information to the client in order to assist the client in choosing a server to connect to.).

Response to Arguments

Applicant Argues:

Jindal fails to teach or suggest servers in a server farm "communicating with one another so as to update identity and status information stored at each of the servers relating to each of the servers in the server farm" as recited in claim 1.

Examiner Responds:

Examiner is not persuaded. The Jindal reference clearly discloses servers in a server farm "communicating with one another so as to update identity and status information stored at each of the servers relating to each of the servers in the server farm (Jindal: column 7, lines 30-38 and column 8, lines 30-36)" as recited in claim 1.

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In order to clarify the record, the Examiner will reproduce the references cited which are related to the rejection of the limitations in question immediately above:

If the DNS server does not have access to the type of information needed to choose a preferred server in accordance with a client's parameters, a default server may be identified, an error message may be returned, the information may be interactively requested from one or more servers, etc. In yet another alternative embodiment, the trigger may be configured to interactively interrogate or query the servers and/or application instances in order to determine a preferred server. One skilled in the art will appreciate that various details concerning the use of a trigger to load-balance client requests, other than those described herein, may be adopted or altered without exceeding the scope of the invention. (Jindal: column 7, lines 30-43)

In the illustrated non-intrusive mode of operation, status objects 200a, 200b, and 200c are invoked on DNS server 100 for the purpose of gathering information from servers 110, 112, and 114, respectively. (Jindal: column 8, lines 30-33)

The information that may be collected concerning an instance of the application illustratively includes its response time for a client request, its operational status (e.g., whether it is up or down)...may also be collected and analyzed as part of the process of choosing a preferred server. (Jindal: column 6, lines 44-54)

From the above reference it is clear that each server maintains identity and status information regarding the load being managed by each respective server. This identity and status information is updated as the state of the server changes. Furthermore, it is clear that at least one server has the means to communicate (by querying) with the other servers in order to gather identity and status information from each server. This received information would update previously stored identity and status information for a given server with the newly received results which reflect the current state of the server that was queried. Since the reference clearly discloses at least two servers communicating with each other to update identity and status information, the Examiner maintains it would have been obvious to one of ordinary skill in the art to repeat this function to allow other servers to communicate with each

other to share identity and status information. The process would be the equivalent to that disclosed by Jindal, but simply repeated so that each server has the means to communicate with each other. Even the Jindal reference asserts that various details to the actual implementation of the invention disclosed therein can be varied by one skilled in the art (Jindal: column 7, lines 39-42).

Therefore, since it appears that each and every element of the claimed invention is either disclosed or suggested by the prior art of record, the rejections given under 35 U.S.C. 103(a) are sustained.

Applicant Argues:

However, one skilled in the art would not seek to modify the teachings of Jindal to include storing "identity and status information stored at each of the servers relating to each of the servers in the server farm" as recited in claim 1, as amended. Since client requests are received at the DNS server, storing the information at the DNS server is the obvious choice and storing the information at another server would be considered a disadvantage that would add delay. As Jindal discusses in the background section "requiring the DNS server to query or access another server in order to resolve the request is inefficient and delays satisfaction of the request." (Col. 2, lines 11-13). Therefore, Jindal teaches away from the idea of storing information anywhere other than at the DNS server if at all possible, and does not teach or suggest that the information could be stored at a server in the server farm.

Examiner Responds:

Examiner is not persuaded. As noted above, at least one first server in the Jindal reference can query another second server in the server farm to retrieve information concerning the second server's identity and status (Jindal: column 6, lines 44-54 and column 7, lines 30-38 and column 8, lines 30-36). Since at least one first server can query a second server to retrieve identity and status information from the second server, it is clear that information is not all stored at the first server. If all information were stored at the first server, then the first server would not need to query the second server to retrieve its updated identity and status information. Therefore, it is

clear that the Jindal reference discloses wherein the information (identity and status information) is stored at each server in the server farm.

Note that the Iindal reference actually includes the limitations in question above. Since the Jindal reference contains the limitations argued by the Applicant above, the Jindal reference cannot possibly teach away from the invention.

Since it appears that each and every element of the Applicant's claimed invention is either disclosed or suggested by the prior art of record, the rejections under 35 U.S.C. 103(a) are sustained.

Applicant Argues:

In addition, Jindal does not teach or suggest "receiving, at the client, the identity and status information relating to each of the plurality of servers in the server farm, from the first server in the server farm to which the client is connected" as recited in claim 1.

Examiner Responds:

Examiner is not persuaded. The Examiner did not cite solely the Jindal reference as disclosing "receiving, at the client, the identity and status information relating to each of the plurality of servers in the server farm, from the first server in the server farm to which the client is connected" as recited in claim 1. The Examiner cited the combination of Jindal and Srivastava as disclosing the previously mentioned limitations. The Examiner's rejection under 35 U.S.C. 103(a) presented above shows that Jindal teaches receiving the identity and status information relating to each of the plurality of servers in the server farm, from the first server in the server farm to which the client is connected (Jindal: column 6, lines 44-54 and column 7, lines 19-26 and column 7, lines 30-38 and column 8, lines 30-36). In fact, the Jindal reference reads perfectly upon the

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Applicant's claimed invention except for the fact that the limitations of receiving information and selecting a server occurs on the server side. This fact is clearly portrayed in the Examiner's rejection under 35 U.S.C. 103(a) as part of the Examiner's process of following the Graham v. John Deere factual inquiries. While the Jindal reference fails to teach this aspect, the Srivastava reference clearly discloses wherein the information received and the selection of a server occurs at the client (*Srivastava: paragraph [0005], lines 8-11*).

Since it appears that each and every element of the Applicant's claims is either disclosed or suggested by the prior art of record, the rejections under 35 U.S.C. 103(a) are sustained.

Examiner Notes:

All remaining arguments presented by the Applicant were simply a rephrasing or regurgitation of the arguments presented above. Therefore, all arguments set forth by the Applicant appear to be adequately refuted. If any part of the Examiner's position conveyed in the preceding office action is unclear, the Examiner urges the Applicant to contact the Examiner to set up an interview so that all issues regarding the instant application can be properly cleared up.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Hung vy For SPE DOW WONG

Patrick A. Darno Examiner

Patril C. aler

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